XL TOSS
SUPER 3D
PLOTTER II
ELFIN MAGIC
#100 DISK FOR XM301

JACG

THE JERSEY ATARI COMPUTER GROUP

HAPPY NEW YEAR ! ! !

JACG BBS

(201) 298-0161

E D I T I O R A L

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I really wanted to start the year off with some super intelligent words of wisdom...but I certainly don't want to fall into the mold cast by D. Busch (please see my NOISE from NOYES article). Furthermore, I'm just recovering from the Euro-Afro-Asiatic-American Flu type A thru Z, which made my two week vacation a continuous circular trip from doctor to hospital to pharmacy to home to doctor...(I'm sure that you get the picture); the end result being that I didn't touch my expanded XL's keyboard for almost the entire time (now that's sick!), and consequently my wisdom has remained latent somewhere behind the fever and headache.

1987 - I digressed - There is NO reason that the JACG shouldn't continue and grow. As user groups go, we are among the best of the best. Active, and participatory membership will ensure the continuation of that. Through our meetings, our Special Interest Groups, our BBS, and our Newsletter, there is something for everybody's utilization and participation. ONWARD!

IN THIS ISSUE

MARK YOUR CALENDAR !!
JACG
Meeting Schedule

FEBRUARY 14, 1987

J A C G Newsletter Advertisements
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RETAILERS - MANUFACTURERS - VENDORS

How would you like to reach a targeted audience of over 700 ATARI computer users? This newsletter has a press run of 800 per month, is read by members and non-members alike, and is sent to over 60 other ATARI User Groups across the U.S. and in several other countries.

Advertising is available on a first-come and space-available basis. Camera ready copy, accompanied by payment, must reach the Editor by the 20th day of the month preceding publication. JACG reserves the right to make decisions concerning the placement of ads within the Newsletter and editing or rejecting advertisements deemed unsuitable.

Advertising Rates

Full page (7-1/2 x 9) ... $48.00
Half page $25.00
Quarter page $18.00

Discount rates available upon request.

Contact: Gary Gorski
         313 Sheridan Ave.
         Roselle, NJ, 07203
         (201) 241-4554

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FLEA MARKET RULES
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In order to clarify the intention of the Executive Committee in sanctioning the use of the BTL lobby before and after monthly meetings for use as a member flea market we publish the following rules:

1. All flea market sellers must be current JACG members.
2. Space is provided on a first-come, first-served basis.
3. Only ORIGINAL programs with ORIGINAL documentation may be sold in the area of software.
4. Hardware of any type may be sold normally without constraint. The Executive Committee reserves the right, however, to limit the physical size and space consumed by such hardware.
5. Flea market business will be conducted only in the lobby and ONLY when the meeting is not in session in the auditorium.
6. The Executive Committee reserves the right to deny or suspend the privilege of flea market usage to any person, member or not, for infraction of these operating rules.

JACG Membership
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The Jersey Atari Computer Group (JACG) invites you to become a member. Dues are $20.00 per year ($30.00 per year international: Mexico and Canada $20.00) and entitle the member to: 1) Receive the monthly newsletter; 2) Purchase programs from the group's extensive tape and disk libraries at special rates; 3) Join special interest groups or form new ones; 4) Benefit from the expertise and experience of other Atari computer users; 5) Participate in group purchases of software at substantially reduced prices; 6) Receive a membership card that entitles the member to discounts at local computer stores; 7) Attend monthly meetings to learn about the latest hardware and software, rumors, and techniques for getting the most out of your Atari computer; 8) Submit articles and programs to the newsletter and give demos and presentations at the monthly meetings; 9) Participate in sale/swap activities with other members; 10) Access the JACG nationally famous Bulletin Board; and 11) Have a lot of fun.

Newsletters are sent third class mail. If you want first class mailing include an extra $6.00 with your basic dues.

If all of this sounds good to you send a check or money order, payable to JACG, to:

THOMAS PAZEL, MEMBERSHIP CHAIRMAN
70 MITCHELL RD. T-7
HACKETTSTOWN, NJ 07840

PRESIDENTIAL PONDERINGS

Joseph Kennedy - JACG

Well, hopefully Santa Claus has brought all the new Atari software and hardware that you had asked for. If he has then I don't have to ask whether or not you're having a good New Year. But let me wish you a happy, prosperous New Year anyway.

The JACG New Year is certainly stating off in a big way. Scheduled for the January meeting are Jahn Jainschigg, the Senior Technical Editor of Atari Explorer and Randolph Constan, the author of Super 3D Plotter II and Circuit Database II. It looks like a good meeting. The meeting would be off to a much better start if Tom "Speak Slower" Pluck had some help setting up the equipment. How 'bout a couple of strong backs to give Tom a hand? No experience necessary we'll provide on the job training.

Thanks are in order for many people:

Oleg Kis and Software Spectrum for the use of the ST with RF feed for each meeting as well as donating software for our raffle. Thanks Oleg!

Art Leyenberger and Bob Mulhearn for donating software for the raffle. Thanks Bob and Art!

Sandi Austin, the User Group Rep for Atari, for attending the December meeting and speaking to the group. Thanks Sandi!

Oscar Granison for two more of his excellent demos. Thanks Oscar!

Bill Brandt for the demo of his Stuff In Stoories program and donating it to the JACG disk library. Thanks Bill! Tom Pluck and the rest of the back page of the newsletter for working so hard to make the JACG what it is. Thanks everybody!!

And a special thanks to anyone that I haven't mentioned here but should have and miss because of encroaching senility!

An example of what dedication is was shown by Dave Noyes before the last meeting. Dave was in Ireland on a business trip and was not to return until late Saturday afternoon. Instead of extending his trip an extra day to see Ireland Dave arranged to leave a day early so that he could be at the meeting. That's dedication! Thanks Dave!

If you enjoy the meeting and other benefits of the JACG thank those that put it all together when ever you can because that's all the pay they get!

One of the put downs that we always hear is that other computers are used in the schools so why should parents buy Ataris. Or Daddy (or Mommy) doesn't use an Atari at the office so they get the same type for the home. Well Atari is planning to do something about this. They have planned presentations for businesses and universities with the ST's. They've asked for our help with leads for Fortune 500 companies or universities, if you have a lead contact Sig Hartmann at 408-745-2906.

Mike Fang of Bell Labs is looking for donations of used computer equipment for use with impaired adults. He spoke to use briefly at the meeting. If you have any to donate or any questions Mike can be contacted at 201-582-3576 (office) or 201-665-1635 (home).

Elsewhere in this issue you will find the article "The German Connection Strikes Again". This is by Michael Schuetz. Those of you who were at the July meeting will recall that Michael gave us a very good overview of the Atari in Europe and Germany specifically. Michael is with the AUC-Brainwave group in Wiesbaden, West Germany. AUC-Brainwave has become an affiliate group of the JACG and they will provide a regular column for the newsletter. Those who would like to contact AUC-Brainwave can do so at the following address:

Michael Schuetz
Fritz Kalle Str 26
6200 Wiesbaden
Federal Republic of Germany

Those who have been following the advent of Turbo Basic on the US scene but have been unable to participate in the best BASIC ever written for the Atari but could not because you had a 48K 400 or 800 can do so now thanks to Michael. He has supplied us with the latest in Turbo BASIC and it should be in our library at the January meeting. Several new disks will also be available in the disk library thanks to Mike and Oliver Saalfeld. The disks are some of Oliver's artwork among others.

We're a Batteries Included recognized User's Group thanks to the efforts of Bob Mulhearn. This means technical support, speakers, promotional assistance for the newsletter, software updates, etc. In fact the first software updates have come through for the members who have Thunder and IS Talk. Those members should take their original disks to Charlie Miller, one of the ST disk librarians, for updating. Thanks Bob and Charlie!

An Atari Fair is coming to Allentown, PA on the weekend of march 13-15, 1987. It will be sponsored by

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ABE'S ACES. If you can make the trip be there to support a fellow user's group. But only go on Friday or Sunday. Saturday is the JACG meeting date for March!

If you want to talk to Atari try one of these numbers - #1 408-745-5308, #2 -5970, #3 -2642, #4 -4758, #5 -5664. But make sure you use a modem as these are the numbers for the Atari BBS. If you call a number that is busy you will be shunted to the next available number. But be advised that each number represents a distinct BBS so that if it seems that you called a number where you were registered and the board doesn't recognize you that's because you were shunted to a different board.

If there's something you'd like to see at the meetings let Tom or me know about it we want to give you what you want but if yoy don't speak-up we can only guess. Remember it's your group speak-up and also pitch in where you can. Don Ursem has - the ST SIG had their first meeting after the December meeeting.

See you at the January meeting!

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GIVE A BIT!!
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Presidential
Bulletin

J. Kennedy - JACG

It has been awhile now since we started mailing the newsletter by third class mail (except to those of you who have paid extra for first class). One thing about third class that can drive one crazy is that it gets mailed once. If you have moved it doesn't get forwarded and it doesn't get returned to the sender. It gets dumped! So if you have moved let us know now if you're thinking about moving let us have your new address as soon as you know it. This little note will also serve as a response to all those letters that have come saying "I haven't got the newsletter for the last three months. What's wrong? Oh, by the way my new address is...." I guess you all get the picture we're working hard for you but there are just some things that you must do for yourself.

Doug Van Hook - JACG

TURBO-BASIC is a public domain program developed by Happy Computing magazine. It was written in Germany and Holland and some of its menu selections are written in German. JACG has TURBO-BASIC available in our disk library for the XL/XE machines, and now has a new release for the 400 and 800 Atari Computers. Included with TURBO-BASIC is a new DOS called, "Mach DOS" which executes DOS functions without ever leaving the BASIC program.

This Dialect of BASIC has changed the entire language by adding commands which encourage organized thinking. Other user's groups have been enthusiastic enough about the language to begin creating libraries of commonly used procedures. Why such high hopes?

This example shows how organized thought can make extraordinary programmers out of ordinary people:

```
10 EXEC HOUS_KEEP
20 EXEC MAIN_LINE
30 EXEC TERM_INATE
40 END
```

After these four lines are procedures, which divide the program into more manageable routines. By dividing the program into smaller parts we can focus our attention on one routine at a time. When these blocks of code are finally executed they work together as a single program. Atari users in Cleveland have plans to release diskettes full of procedures which can be included in your programs.

In addition to the PROC and ENDPROC facility, TURBO-BASIC permits Labels for line numbers which can be used in GOTO statements. For example GO# MAINLINE will cause the program to jump to the line number defined as MAINLINE. Once a routine is defined, you never need to worry about its line number.

If you are still unconvinced of its value, TURBO-BASIC allows selective line renumbering. For example renum 50,100,10 will change line 50 to line number 100 and continue to renumber in increments of ten.

Not enough? How about a compiler for your completed program. A cookbook explanation was published in the Australian Atari Gazette. I couldn't do any better so I'll include their article:

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provided this credit is included.

I know everyone is still rubbing their hands in glee over TURBO-BASIC, the new public domain BASIC interpreter imported from Holland and Germany. This month we are proud to present a new treat from our international friends overseas, the TURBO COMPILER.

The TURBO COMPILER will increase the speed of your TURBO-BASIC programs 3-5 times and regular Atari BASIC programs can be speeded up to 10-15 times faster. The TURBO COMPILER is very easy to operate. It can be used with more than one disk drive, even drive 8, the 130XE ramdisk. On the TURBO COMPILER disk, you will find several files. The important ones for the operation of the TURBO COMPILER are COMPILER.COM and RUNTIME.COM. Before you begin, you should prepare two disks. The first one should be a blank formatted disk with DOS.SYS and DUP.SYS written on it. Your second disk should contain your BASIC program (TURBO or Atari BASIC).

To begin, insert the TURBO COMPILER disk into your drive and turn your computer on. When it has finished loading you will be in TURBO BASIC. Type DOS to get to the DOS 2.5 Menu. Choose DOS Option "L", Load Binary File and load the file COMPILER.COM. After a short while, you will see a screen full of German, if you do not read German do not worry, that is what this article is for! At any time that you are on this screen you may reboot the system by hitting Control-R or you may return to DOS by hitting Control-D. You will be asked if you really want to do this. If you do, don't forget to hit 'J' for Ja and not 'Y' for Yes!!

To compile your programs, remove the TURBO COMPILER disk from the drive, and insert the disk with the program you want to compile. (If you have two drives, insert your disk with the program to compile in Drive 2 and the blank DOS disk in Drive 1.) Press the number 1 key (number 2 if you have 2 drives). A complete listing of all the files on that drive will appear on the screen with one highlighted in inverse video. Using the arrow keys, highlight the file you want to compile an hit Return. That's all there is to it!

At the top of the screen, you will see the line numbers fly by as the program is compiled. When it is finished, you will be prompted for a file name to save your compiled program under. It has to have and extender of CTB (for Compiled Turbo Basic). The program will not let you use any other extender. At this time, if you have one drive, you should remove your original disk with your original program on it and replace it with your blank DOS disk. If you want your compiled program to be an AUTORUN file, you should name it AUTORUN.CTB. Then the file will automatically load and run at bootup time.

There is one more step that you must do to get a completely runnable compiled program. Go back to DOS and copy the file RUNTIME.COM from the TURBO COMPILER disk to the disk with your compiled program on it. Rename the RUNTIME.COM file to the name AUTORUN.SYS. Your disk is now ready to go. The TURBO COMPILER does not compile runnable code, you must run the RUNTIME.COM file to run your compiled program.

One technical note on the TURBO COMPILER: If you're not familiar with other compilers for the Atari computers, you should know that many have trouble compiling certain types of statements or insist that you organize your program structure in a certain way. So for none of these problems have occurred on any programs we have tested with the TURBO COMPILER. The only statement it wouldn't compile so far is the END statement. The only structure that we have had trouble with is a FOR-NEXT loop that has two or more NEXTs for one FOR.
For example:

```
10 FOR X=1 TO 5
20 IF X=3 THEN NEXT X
30 NEXT X
```

Other than those two examples, we have had no problems compiling any type of program, either TURBO or Atari BASIC. Please let us know [Western New York Atari Users Group] of any problems you run into compiling any types of statements or programs. Whether you program in TURBO BASIC or just want to supercharge your old Atari BASIC programs to super speed, I'm sure you will find the TURBO COMPILER will fit all your speed needs.

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GIVE A BIT!!
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COMPUTERS
for
HANDICAPPED

Mike Fang
Berkeley Heights Rotary Club
12/14/86

To: All Public Media
Re: Computers for Handicapped

Mr. Murray could not care less what 200 + 400 is. But if you asked him the worth of 200 shares of AT&T and 400 shares of Exxon, his eyes light up. Once a vigorous business executive, Mr. Murray (not his real name) suffered a riding accident seven years ago, entered a coma, and lost much of his speech and memory. Today Mr. Murray is using a computer to train his short term memory. The problem is, however, that most of the educational software on the market are for kids and cannot keep his interest. If only the computer could ask him questions about fun things, like stocks and bonds ...

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David was in an auto accident 14 years ago, entered a coma, and was not expected to live. Today he can move about in a wheel chair and even go swimming, but he has memory and motor coordination problems. SHARING, a volunteer group in New Providence working with handicapped adults, is looking for computer and software that can help with David's short term memory, math skills, and decision making capability.

Through cases like these, the Berkeley Heights Rotary Club has become interested in the use [of] personal computers to help handicapped people. The Rotary Club seeks donations of computers and software to organizations such as SHARING for use in helping the handicapped to learn or to communicate. All makes and types will be considered, so long as they work. A member of the Rotary Club with computer experience has volunteered to develop new programs or modify existing ones to make them fit special needs. Volunteers to join him are also welcome. For more information please call Mike Fang, day: [201] 582-3576, evening: [201] 665-1635.

EIGHT-BIT SOFTWARE SUPPORT
E. Tomlinson - JACG

Three cheers for Electronic Arts. There has been a lot of complaining about the lack of new software for the eight bit Atari computers, and Electronic Arts in particular has often been the center of these attacks. Recently though, Electronic Arts has released Lords of Conquest, Mail Order Monsters, Ogre, Rommel Battles For Tobruk, and Chickamaugua. In the same period of time Activision and Broderbund have released nothing. Maybe now people could write 'thank you' notes to Electronic Arts for their continuing Atari support.

Unfortunately, there still are a lot of great programs that have never come out for the Atari. A wish list might include Newsroom and Certificate Maker by Springboard; Gunship by Microprose, Infiltrator and Bop 'N' Wrestle by Mindscape; Movie Monster Game, Championship Wrestling, Summer Games II, Winter Games, World Games and Super Cycle by Epyx; Where In The World is Carmen SanDiego, Captain Goodnight, and Airheart by Broderbund; and even some more classics by Electronic Arts such as Bard's Tale, Heart Of Africa, Skyfox, or Adventure Construction Set.

I know that loyal Atari users have seen articles like this too many times, but it really is important to support the software companies that do write good software. It is also important to let companies know how you feel, and what programs you want to see for your computer.

I would also like to add that there is going to be an Atari Fest at the Allentown Holiday Inn on March 14th and 15th. It sounds like its going to be quite an event. Even Atari itself will be attending this one. This might also be another good opportunity to show software companies just how many active Atari owners are out there.

MY ATARI STORY
Don MacLeay - JACG

I'd like to pick up the ball from Mark Knutsen's challenge in the November Newsletter and tell my Atari story.

I bought my Atari 400 six months after talking my brother-in-law into buying one. He paid over $300 for his, and I got mine for $275 from Toys-R-Us plus $125 for the 410 recorder and BASIC. I remember evenings when six of us would spend the time playing only two games- Pac-Man and Missile Command. Buying software was a slow and expensive process. It took me four years to get my ultimate system of a 130XE , two 1050 Happy Drives, a Prowriter Jr. printer and Commodore 1702 monitor. I can't think of a better setup unless US Doubler chips are much faster than the Happy Enhancement.

I learned quickly to copy software and take off copy protection. Why? Software was expensive and there was a lot of junk. There was no way to tell a kiddy game from one meant for adults. And there was so much! No store could carry it all, no one could afford it all, and those that did not sell (from bad reviews, being overpriced, or from the great shakeout) disappeared, which was the greatest problem.

One evening we discovered how to make Shamus go so slow he was invincible. However, it took 6 hours to reach the red level and then we had to give up before reaching the end!

If any software companies are listening -the best way to keep people buying your wares is to make them good enough to require large documentation, and updates with new features for the new machines. For instance I never hesitated laying out the cash for Flight Simulator, Atariwriter Plus and Syncalc 130XE. Imagine an updated version of Crush, Crumble and Chomp with 3D graphics and the real New York and Tokyo?! The bottom line is we will always want the BEST for our machines.

Am I thinking of getting a new computer? Constantly. We use IBMs at work but programming them is a pain. The ST series is nice but Jack Trameil only intends to sell sealed boxes that must be replaced. Witness the "expansion

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bus" on every model that never gets used. If I switch to the Amiga I'll get a mouse, super graphics, voice, stereo sound, and expansion to eight megabytes.

Of all the languages I like FORTH the best. Its fascinating how a language can be "extensible", that is, the commands that come with it are only the beginning. You continually expand the list.(My public thanks to Don

Forbes)

This Christmas I was stuck on what to get my Brother-in-law. His 400, even with a memory upgrade, won't run the programs I want to give him. But then again isn't a new 130XE the least expensive "peripheral"?Boy will he be surprised.

Happy New Year!

Editor's note: Elsewhere in this issue please read Eli Tomlinson's article on 8-bit software. It appears that some of the companies are listening. Better software at more reasonable prices is available.

PATRONAGE

As you leaf through this newsletter, please take time to digest not only the article content, but the advertising content of the publication. Our advertisers, by placing ads in OUR newsletter, not only show, by this act, their support of ATARI, but also their support of OUR user group. By far and away, the JACG's greatest expense is the publication of the newsletter, and the cost is defrayed proportionally to the amount of advertising in it. It is, I believe, only right and proper that we reciprocate by patronizing those who have shown their commitment and support in this fashion. Further, I don't think it a bit out of line, to suggest to those who don't, that a positive impact on sales could result from advertising in OUR newsletter. After all, I've said it before, and it's a well-known fact: ATARI owners are VERY sophisticated. The next time you go to purchase an item for your ATARI, ask yourself these questions:
1) Does this establishment advertise in our newsletter?
If the answer is yes, make your purchase and mention "where you saw the ad." If the answer is no:
2) First ask the proprietor why the establishment doesn't advertise in OUR newsletter; and then ask yourself why you're patronizing the establishment.

The philosophy is VERY simple. Support those who support us.

ed.

FROM THE EXCHANGE

R.P. Mulhearn - JACG

J.A.C.G. each month receives a large number of exchange newsletters. There is sometimes a wealth of information to be shared in the ATARI community. Just the problem you needed an answer for,or a review of a program you would like to buy,could be found among the pages of various club's newsletters from around the world. All the newsletters received are availble to members for checkout both before and after the meeting at the club tables in the lobby. Stop by and check it out.

A quick review of some newsletters received in October follows:

Mile High Atari OCT86--Indus GT Ram card review

Atari Exchange of Louisville OCT86--Atari's DOS's Compared

Atari Federation OCT86--Modify AtariWriter+ for Disk Dir 1-9

Keeping Pace OCT86--ST hints and tricks from Atari's BBS

Status oct86--Computer assisted video production

M.F.A.C.C. OCT86--Delphi BBS guide

Bay Area Atari Users Group OCT86--Going online with the AVATEX modem and the 520ST

D.A.L.ACE OCT86--ST memory managment--BOS systems for busness and the ST

R.A.A.U.G OCT86--Disk drive maintenance

Mid.Michigan Atari Mag OCT86--Tech hints--130XE Keyboard fix

ACE of N.S.W. OCT86--Assorted ST reviews from down under--Efficient programming 8 bit BASIC

Melbourne ACE OCT86--ST ram disk programs pros and cons

Modesto Atari Computer Club OCT86--Going online with GENIE

ACE of Columbus OCT86-Adding a speech synthizer to your ATARI

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HOT NEWS

Supplied by the CHAOS BBS
-Reprinted From MID-MICHIGAN ATARI MAGAZINE by permission.

Two new ST magazines are making their way into users' hands. ST BUSINESS is an independant bi-monthly ($30 for six issues), and is aimed at the small business user (Check your user group library for a sample copy). STuser is a monthy magazine from England, republished and distributed from Canada. It's a chunky issue for serious programmers and users, and runs $35 a year. (G-Plus Computer Products, 130 Albert- Suite B-8, Ottawa, Ontario K1P5G4.

Sig Hartmann, ATARI Vice President, is now heading the BIG BUSINESS/ MANUFACTURER/ UNIVERSITY sales and promotion department. He encourages those who would like to SAVE BIG CORPORATE MONEY to call him at (408) 745-4967, before they buy something from the overpriced/underpowered competition. Offered are terminal emulators and other applications.

What's the best selling computer of all time? To date, the ATARI 2600 game computer (with 8K of memory) has outsold any other computer product with over 20 million units!

How about corporate ranking of "real" computers? PC WEEK reports 1.7 million IBM units (all) sold in '85 for first place with 29.6% of the market. It was not ATARI's best year, but they did a respectable fifth place (with 5.5%) behind APPLE, COMMODORE, and TANDY, beating COMPAQ, H-P, ZENITH, and WANG. '86 figures should be better.

ATARI says in their October USER GROUP NEWS that they are actually going to have a TV commercial for the XE computers. But the XE will be touted as an "ultimate game machine" rather than as a serious computer. Sigh.

The same issue of the NEWS describes their "BBS", actually FIVE independant ST sytems running the MICHTRON software. Call 408-745-5308, but beware, the system will arbitrarily switch you to an available line, and you need a password on EACH separate system. Hard to believe that ATARI can't come up with true MULTI USER.

ATARI STOCK opened at $11.50 in November and has climbed to $14 in the month since. Are you rich yet?

HAPPY COMPUTERS, makers of the best known copy-protection breaking upgrades for ATARI disk drives, has seized the opportunity given them by THE DUPLICATOR people. Opening to bad reviews, the DUPLICATOR nonetheless sold a lot of units. If you bought one and still find the new DUPLICATOR software unsatisfying, you can buy a "CHEERUP MODULE" from HAPPY to make your DUPLICATOR into a HAPPY. It runs $49.95.

HYUNDAI (the Korean automaker) is now also in the computer business. Marketing the "BLUE CHIP" PC clone for about $700 complete, Hyundai will sell them through DISCOUNT MERCHANDISE STORES. John Rossi, president of Blue Chip, says "Commodore and Atari have done well" in that type distribution. They should be seen in TARGET stores (a Dayton-Hudson discount house) and then many others by the time you read this... where the ATARI's USED to be seen. GEE, we aren't even safe in TOYS 'R US anymore!

Volley after volley have been launched in the pages of COMPUTER SHOPPER magazine pitting the AMIGA and ST against each other. In November, "THE MYTH OF ST SUPERIORITY" attempted to smear the ST with rumors, out-of-date information, and just plain prejudice. Fortunately, even while cutting up the ST as comapred to the AMIGA, author Sheldon Leemon had to conceed on many points that the ST was in fact a very capable machine. Even though there was a very well written rebuttal by D.F. Scott in the January issue, the entire discussion does nothing but help the reputation of the ST... a machine that MAY or MAY NOT be as "good" as or "better" than the AMIGA but IS HALF the price.

Supplied by the CHAOS BBS - (517) 371-1106

Let the JACG Do the Work for You

Gary Gorski
JACG Sales Manager

Sit back, relax, and earn extra money, by letting the JACG sell your original software. For one reason or another, we all buy software that just isn't right, has been outgrown, or is no longer needed.

The JACG will sell that software (maximum of 3 per month) at it's monthly meetings. All you have to do is to bring in the software and original documentation clearly marked with your name, member number, and the price you would like to sell it for!! For 20% of the sale price, the JACG will handle the sale for you with no hassles. Please be sure to bring your software early to the meeting so it can be displayed at the flea market. This can be a wonderful way to get that much needed extra ca$h.

If you need additional information, please call or drop me a line.

JACG HALL OF FAME GAMES

Don MacLeay - JACG

The JACG HFG-list is to honor those games that captured our imaginations. They may be current or not but the way the voting is set up newer games won't have been experienced by enough of the membership to make the list.

Each month in the Newsletter and at the meeting there will be ballots with a selection of games loosely tied together. Check off as many of the games as you feel deserve the honor. Those games that are checked off on more than 80% of the ballots submitted are admitted to the

For the first ballot let's look at the early cartridges. These were all 8K in size and presented a considerable challenge to the authors.

JACG Hall of Fame Games Ballot #1

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....STAR RAIDERS,ATARI
....PAC-MAN,ATARI
....MISSILE COMMAND,ATARI
....WIZARD OF WOR,ROKLAN
....SHAMUS,SYNAPSE
....ASTEROIDS,ATARI
....CENTIPEED,ATARI
....Q-BERT,ATARI
....BASKETBALL,ATARI
....BLACKJACK,ATARI
....SPACE INVADERS,ATARI
....SUPER BREAKOUT,ATARI
....COMPUTER CHESS,ATARI
....3D TIC-TAC-TOE,ATARI
....VIDEO EASEL,ATARI
....KRAZY SHOOT OUT,K-BYTE
....K-RAZY KRITTERS,K-BYTE
....K-RAZY ANTICS,K-BYTE
....K-STAR PATROL,K-BYTE
....GORF,ATARI
....FIREBIRD,GIBELLI
....QIX,ATARI
....GALAXIAN,ATARI
....DEFENDER,ATARI
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Please don't look for me at the meetings as I work on Saturdays. You can reach me at 468 Simons Av.,Hackensack,NJ 07601,488-8034.

Ballots will be on one of the tables prior to the meetings, and may be marked and given to Dave Noyes, or mailed to me. Thank you.

IN THE DISPATCH POUCH.

Bill Martin- JACG Inc.

From time to time we get special offers or advertisements from hard/software distributors. I'll try to mention them here. Presence of an item in this column is not to be considered an endorsement. Also, please don't hold me responsible for typo's or mis-interpretations, and here's the BIG ONE; if you make an inquiry, mention where you saw it. They might advertise with us, and most important of all, send me a free one!

Address all goodies to; Bill Martin, P.O. Box 356, Whitehouse Station, NJ 08889.

EPYX 600 Galveston Drive, Redwood City, CA 94063. Offering eight (8) new programs, none of which will work with the 8-bit Atari. Here is the list for the ST: World Games; eight impossible events around the world like cliff diving in Mexico or Suomo wrestling in Japan. Winter Games; a new version for the ST. Like World Games but Olympic in scope (?). Championship Wrestling; Grunt, groan and crunch. Super Cycle; A two wheeled Pole Position with "...ugly crash and burn.". The other programs being released, (but not for any Atari) are World Championship Wrestling, World Karate Championship, The Movie Monster Game, (all grunt, groan and crush) and Destroyer, (out looking for another computer with a null modem hook up running Silent Service). The last offering, again not for Atari is Graphic Scrapbook, a multi-volume set of images for Print Shop.

If any of these offerings (non-Atari) whet your appetite, drop EPYX, (i.e. Broderbund) a line and tell them. It worked with Electronic Arts! If you do, be sure to mention that they never sent us a review copy of their new joystick, (see "goodies" above).

INFOCOM 125 Cambridge Park Drive, Cambridge, MA 02140, has released its Fall, 1986 issue of "The Status Line", it's quarterly newsletter. Noteworthy is the fact that they are giving away, free, InvisiClues if you purchase Moonmist, Ballyhoo, Trinity or the Leather Goddesses of Phobos interactive games. The offer expires February 15, 1987.

The Merchandise Market 4601 Trailwood Dr., Greensboro, NC 27407. A floppy disk clock, ("it's about time..."), in bright colors, and encased in plastic. It actually looks pretty good in 5 styles and 7 color combo's! You can even have your corporate identity affixed. $18.45 including shipping. How about an official JACG clock? See Gary Gorski!

Jefferson Software 12416 N. 28th. Drive #18-235, Phoenix, AZ 85029-2434, is releasing a Modula-2

development system for the ST. They are looking for people to beta test the system but here's the catch. It will cost you $??.95, $10.00 less than "industrial strength" system plus some paperwork, (see Gary Gorski). You may, if you desire, upgrade for the additional $10.00. You will also be able to buy future upgrades for the same price. Beta is expected effective January 1, 1987 and the final release, April 15th, 1987.

¥Electronic Arts¥ "Farther", Volume 1, No. 1 published quarterly by "EA", 1820 Gateway Drive, San Mateo, CA 94404, (telephone, 415-571 7171). The cover shouts, "What's new for C64, Apple IIGS, IBM, Amiga, Mac". Reading the fine print on the inside front cover I discovered that the best seller games, "Marble Madness and Paperboy are translations of Atari arcade games. Maybe we should get our word processors and a letter writing campaign going again. Maybe we should go out and buy EA's latest offering, "Starflight". Maybe that will tell Mr Hawkins that Atari owners do like quality software. Yeah, how about it! Go out and "buy one for the gipper!"

Well friends, I've finally graduated. You will note that Dick Kushner's advertisement for his ATR8000 is not in this issue. Yep, my 3 year old son bought it for his daddy so that I "may expand my horizons". My kid sure does talk funny! Now he's talking about getting me a co-processor so that I can run MS-Dos, (whatever that is), and say's he is looking for an $89.00 20 MEG hard disk to go with my 5 DD drives. Am I getting to be a hardware freak? See you next month, God willing.

SUPER 3D PLOTTER II
by Randolph Constan

Reviewed by Joseph Kennedy

Okay, I'll admit it I'm one of the first to complain about reviews from the magazines that only say good things about software that is reviewed. When I pay for a magazine I expect objective reporting and a little guidance on the good and BAD software that is available. However when one writes for a user group newsletter it is usually about software that has been purchased for personal use and therefore it can be expected that most reviews would be positive. I mean who's gonna' spend their time writing about software they don't like and therefore probably don't use.

That said I can now rave about Super 3D Plotter II. What a program for the 8-bit machines! Now you can design models in 3D and rotate them through space. You can eliminate hidden surfaces to make an object more realistic. You can color surfaces. You can even use your Atari for CAD purposes with S3DP (to steal an abbreviation from the program author).

S3DP comes with one of the most important peripherals you can find - a well organized manual. The manual is set-up to lead you through the first use of the program with graphics included on the disk or do some initial artwork as well as be a handy reference guide as you do more complex work in the future. Remember I said that this is a solid, well organized manual. It's not a glossy paper, bound book. The author has chosen to market his software on his own to be able to keep the price of an excellent piece of work at a reasonable level.

As you begin to work through the manual you get a very good introduction to the S3DP program and its capabilities. You will also get a very thorough overview of the principals of spatial relationships. Mr. Constan helps you to first layout an image on paper before you even begin to work with the computer. The data you generate on paper can be entered in two ways to S3DP. The first is by joystick drawing on the screen. The second is by entering the information on the points and lines in table form in the data editor. Substantial information on just what the capabilities and (very forthrightly) the limitations of S3DP is supplied by the author to aid the user in making the most of the program. Files developed for the program from Antic magazine "Solid States" can be converted for use in S3DP by use of the conversion program supplied on the master disk. A screen dump to printer function is incorporated into S3DP which works with Epson and Epson compatible printers however the author has supplied the information needed to prepare a printer control file for other brands.

I could go on and on about this program and the small points the author has attended to and documented but I would be at for a long time. I can only say that you should get Super 3D Plotter II from Elfin Magic for yourself. Then take a trip through the tie fighter and watch it fly by on your screen and with it all it will suddenly become apparent to you that Super 3D Plotter II is one of those program you should have. My hat is off to Mr. Randolph Constan for the development of this program and for the fine very he has documented it. More software producers should follow his lead.

I DIRECT YOU TO
WRITE AN ARTICLE
FOR THE NEWSLETTER!

The German Connection Strikes Again

Michael Schuetz - A.U.C.-Brainwave

Hi there folks from the JACG. Those of you who attended the July'86 meeting might still remember me. I'm the German Atarian who gave you a little insight into how Atari is doing in Germany.

By looking through some old JACG Newsletters I found out that there always seems to be a need for articles. So I decided to contribute !!! I thought, how about letting those guys know every once in a while what's new on the other side of the ocean. So here goes:

First I want to give you a list of what kind of Atari computers have been or are still being sold in Germany. From the 8-bit line the 400, 800, 600 XL, 800 XL and the 130 XE are or have been available in Germany. This means neither the 1200 XL (Were we lucky !!!) nor the 65 XE ever hit the market over here. With the 16/32 bit ST's it goes the other way around. There are more different models in Europe than in the states. We do have the usual 520 ST and the 1040 STF, but there also are the 260 ST (=512 KB RAM), the 520+ (=1 MB RAM) and the 520 STM (512 KB RAM & standard TV connection).

Since the summer of '85, when the ST computers were launched, Atari sold more than 80.000 STs in Germany. Alone during the first half of 1986 26.000 Mega-Ataris (520 ST+ and 1040 STF) went over the counter. Commodore, on the other hand, just released their sales figures for 1986: The Amiga, after being presented in Germany at the beginning of this year for the first time, didn't even touch the 10.000 border. So far around 8.500 have been sold in Germany. From these figure you can see that the ST is the hottest computer in Germany right now.

And good old Jack and his Clan won't rest on their success. They are already planning their next move. At the Orgatechnik Computerfair in Cologne (October'86) the Atari booth as always in the last two years was one of the main attractions. Atari again had invited some software vendors to present their products at their booth. But the most interesting thing to see was the famous Blitter Chip in Action. On one table there were two 1040 STF computers (one with the Blitter and one without it) running some great graphic demos. One of the demos looked familiar. It was the one with the bird flying past the waterfall and the beach scene. Only this time he was not alone !!! A whole bunch of white birds was flying across the two screens. While the flight on the "old" ST looked a little jerky it looked very smooth on the Blitter ST. But when you asked the Atari officials how much the Chip would cost

and when it would be available, you didn't get any clear answers. We soon found out why:
A look inside the Blitter-1040-STF revealed that this was not an upgraded 1040. Under the 1040 STF cover there was totally redesigned lay-out motherboard. The Blitter-Chip needs its own socket and also a new operating system. At this Prototype the new OS was loaded from disk and it didn't even work in the ST High resolution (640 x 400).
Also this machine didn't have the old operating system on six 32 KByte ROM Chips, oh no !. There only were two ROM Chips each equaling 96 KByte.
As it looks right now all ST's sold so far can not be upgraded with the new Blitter Chip as easy as it had been expected.

Again also some rumors concerning the 32 bit Atari TT were spread. It is said that this new machine will be presented for the first time at the beginning of the next year. May be the CeBit Computer Show, being held in Hannover in March'87, will see the world premiere of Ataris new miracle machine. The TT will have two Operating systems: On one hand a Unix operating system and on the other hand Ataris own TOS. The heart of the TT will be the 12.5 MHz Motorola MC 68020 processor and the co-processor MC 68881. The highest resolution is supposed to be an awesome 1024 x 1024 pixels.

Well, we'll have to wait and see.
In the meantime let's get back to the already very real world of the ST. Almost a year from now a new Basic called Turbo Basic rocked the Atari 8-bit world in Germany and became sort of a new standard for the small Ataris. Now something like this happens again only this time to the ST. Frank Ostrowski the author of Turbo Basic has done it again. With this new Basic dialect called "GfA Basic" he has built the alternative to the old ST Basic that was tedious and full of bugs. Just like Turbo Basic for the 8-bits GfA Basic for the ST sets new standards in structured programming and speed of execution. In nine benchmark tests the ST with Gfa Basic was sometimes more than ten times faster than an IBM AT and a Commodore PC 10. GfA Basic costs about DM 170,-- which equals $ 85 . All in all a worthwhile investment. By the time you read this the GfA Basic Compiler is supposed to be ready too. Well, folks that's all for this time. I hope my English is understandable (but may be you got lucky and your editor corrected the biggest mistakes I made). If anybody is interested in correspondence with a German Atarian so go ahead. My address is:

Michael Schuetz
Fritz-Kalle-Str. 26
6200 Wiesbaden
West Germany.

Millionaire!

Donald Forbes - JACG

Fortune only knocks once! At the flea market for the last meeting there was a copy of Millionaire for the Atari that you could have picked up for a paltry price.

This is a computer game (in the form of a tutorial) that teaches you how to make a million in the stock market, the program used by leading brokerage houses to instruct their broker trainees. If you failed to snap it up, you have no one to blame.

Millionaire, by Blue Chip Software (now owned by an Encyclopaedia Britannica company called Britannica Learning Companies), is the outstanding stock market simulation package that runs on the Atari and many other popular computers.

The package has many boosters. One calls it the "state-of-the-art investment portfolio fantasy." One says that it "successfully captures the interest and excitement, as well as the inherent risk, of playing the stock market." Another says that "thanks to Millionaire I've developed a knack of picking good stocks ... when is YOUR company going public?"

"I'd love nothing more than to make a real killing in the market -- but you can GET killed, too," says another fan. "Millionaire let me indulge this fantasy, and when I do get killed, it hurts -- but it's painless."

This is not just a macho game. "In the past, my wife would never even look at the financial page of the newspaper. But one day last month she looked over my shoulder while I was playing Millionaire to see what the excitement was all about, and before you know it she got hooked, too. And now she always checks the financial page to see how 'her' stocks are doing."

How does it work?

The advertising blurb says: "Put yourself in high gear and join the risk takers, because you are about to experience the New York Stock Exchange. You start with $10,000 and 15 stocks from five industry categories. Learn the market as you are faced with influences based on true-to-life events. Good judgment is essential to the status of your personal portfolio. It includes an introduction to buying on margin, call options, put options, and borrowing against your net worth."

The aim of the game it to make a million as fast as possible -- by shrewd, timely investments in stocks and options. You begin as a Novice with $10,000 in cash with which to buy and sell stocks. Your first goal is to make $2000 by raising your net worth to $12,000. Net worth is the sum of your assets (cash, stocks and options) less your liabilities for loans, taxes and commissions.

Now you become an Investor, which lets you buy stocks on margin (the broker lends you half the money). Now you can shoot for $18,000 and the next level.

You then become a Speculator and can also purchase calls in the option market to raise your fortune to $40,000. A call lets you buy a stock for a set price for a limited time.

If you make it, you become a Professional entitled to purchase put options and to aim for $100,000.

If so, you become a Broker and can get loans up to 80 per cent on your holdings, the last step on the road to the ultimate goal: Millionaire.

Here are the five groups of stocks that will make your fortune: computer (IBM, NCR, Control Data), oil (Exxon, Mobil, Conoco), retail (Sears, Tandy, K-Mart), auto (GM, American Motors, Bendix), heavy industry (US Steel, Dow Chemical, Caterpillar).

The game consists of 91 weeks of stock market fluctuations, beginning at week 13 (to give you some past history to work on).

In each week you get: a graph of the stock market as a whole, a graph of one of the five industry groups, a weekly list of prices and price changes of the 15 stocks, and a Financial Journal with news items (which are the most significant clues in the game). News items may be inconclusive but they may signal price movements. In fact, the stock fluctuations in the game are tied to these news items. Once you have made your selections, then typing W in the command mode will advance you to the next week.

To test the game I invested all my money in 189 shares of IBM stock at $52.04 and did no trading. By the end of week 66 I had raised my assets to $12,551, which now made me an Investor. At the end of week 91 the game came to a halt and I was informed that I was worth $10,429, an increase of $429, that I was rated Investor, and that my high score had been $16,101.

High	Low	Stock	Close	Change
90.20	38.08	CDC	90.20*	1.04
45.36	32.00	IBM	45.36*	1.44
62.36	37.44	NCR	60.24	−2.12
78.00	39.72	CNO	65.32	−4.00
37.60	31.00	EXX	36.36	−1.08
62.60	30.36	MOB	62.56	−0.04
66.16	29.00	KMT	61.76	−1.72
69.36	28.28	SRS	66.16	−3.20
51.68	30.24	TDY	46.92	−1.68
27.80	22.28	GM	24.12	−1.28
56.92	28.80	AM	54.84	−2.08
41.40	27.72	BDX	38.44	−0.88
42.60	30.20	USS	42.60*	2.36
60.80	33.20	DOW	60.80*	4.08
61.16	32.88	CAT	61.16*	5.92

There were 10 losers this week.
There were 5 winners this week.
The market lost 2.5 points.
An average share gained $0.22.

Press any key to continue.

▶

Donald Forbes - JAC6

```
      WEEK: 15              '   BROKER
INTEREST:        $ 0   LOANS:          $ 0
NET WORTH:  $100,000   CASH:      $100,000
```

MENU SELECTION

```
DESC — Display company descriptions
GRAPH — Display graphs
NEWS — Display Journal/stock changes
COST — Display stock/option prices
PORT — Display a portfolio
BUY — Start a buy transaction
SELL — Start a sell transaction
LOAN — Borrow against net worth
WEEK — Advance to next week
END — Leave Millionaire session
```

Enter action desired:

Press any key to continue

STOCK MARKET


```
741
721
701
681
661
641
621
601
581
561
    32 35 38 41 44 47 50 53 56 59
                 Weeks
```
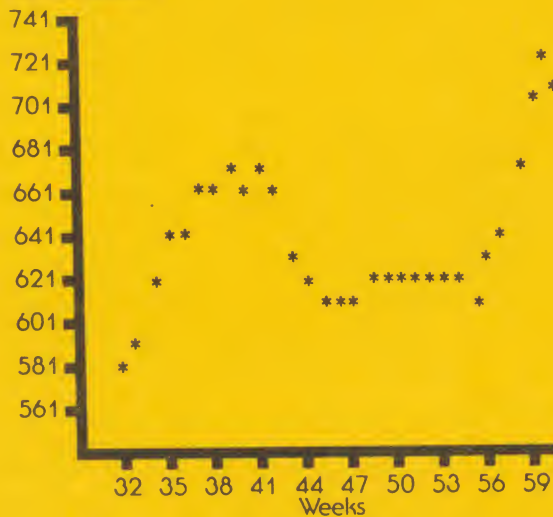
There is an old saying in the computer business: No one ever got fired for buying IBM. But I also suspect that no one playing Millionaire and just buying IBM ever got rich either.

Fortune only knocks once, but remember that opportunity is always just around the corner. After I bought Millionaire I also got a mail order catalog from Computer Direct, a division of Protecto Enterprizes, 22292 N. Pepper Rd., Barrington Ill 60010 (312/382-5244) (We Love Our Customers) offering Millionaire on disk for the Atari on sale (at half the list price) for a paltry $14.95.

Here is the story of what Prolog does, and for two reasons.

If you want to read today's literature on artificial intelligence, you should at least be familiar with both LISP and Prolog, the major languages.

Secondly, most of the descriptions of Prolog are confusing instead of enlightening. They attempt to explain all at once: (1) the features of Prolog, (2) how to code it, and (3) the obscure jargon that Prolog experts use to talk to each other.

So here we will present a simple-minded explanation of what Prolog does, and save the complexities for another time.

Prolog is short for 'programming in logic.' The language was develop in 1972 at the University of Marseilles by Alain Colmeraur and associates. The current "standard" for Prolog is spelled out in a $20 (or so) paperback "Programming in Prolog" by W.F. Clocksin and C.S. Mellish of Edinburgh University (Springer-Verlag NY, 1984, 297 pages). They do not, however, define an implementation.

Prolog, in one sentence, allows you to create a database and then question the database. The amount of information can be as large as your hardware permits, and the search time is also dependent on both the hardware and the software.

The basic idea behind Prolog is to give the computer the information, and then to let the machine find the answers by itself. The language is descriptive or "declarative," instead of "procedural" as in BASIC or Pascal, where you must tell the computer step by step what to do.

For example, you can create this database:
```
    president is kennedy
    treasurer is vandenberg
    editor is noyes
    ?
```
where the question mark invites a question.
```
If you ask
    editor is noyes
then Prolog will come back with
    true
    ?
If you ask ((wrong spelling))
    treasurer is vanderberg
then Prolog responds
    false
    ?
If you now ask
    WHO is president
then Prolog comes back with
    WHO = kennedy
```

On the other hand, if you ask
    WHO is kennedy
then Prolog answers
    WHO = president
    ?

The statements in Prolog are in the form of sentences, a verb with one or more nouns, such as
    ursem likes library
    noyes likes newsletter
    pluck likes programs
so that we can ask questions such as
    martin likes SOMEBODY
    if SOMEBODY likes newsletter
to which Prolog will respond
    SOMEBODY = noyes
    ?

Prolog does not care whether we say "ursem likes library" or "library likes ursem" provided we are consistent throughout. We can also have multiple nouns for each verb, as long as each statement follows an identical pattern:
    joe_montana plays football as quarterback for forty_niners
    larry_bird plays basketball as forward for celtics
    roger_clemens plays baseball as pitcher for red_sox
    ?

Before Prolog will accept these statements, however, we must provide some additional information. Each noun must be one of the following: symbol, character, string, integer, real number (with decimal point), or a file. Therefore we must spell out the data types ahead of time either by specifying
    player, sport, position, team = symbol
    player plays sport, position, team
or, more cryptically,
    "symbol" plays "symbol" as "symbol" for "symbol"
If we now ask Prolog the following questions (where the underscores stand for wild cards):
    Player plays _,_,TEAM
then Prolog will respond with
    PLAYER = joe_montana TEAM = forty_niners
    PLAYER = larry_bird TEAM = celtics
    PLAYER = roger_clemens TEAM = red_sox
    3 solutions
    ?

You will note that so far we have merely been feeding facts to Prolog, and Prolog has been able to answer our questions by repeating the facts.

One of the strengths of Prolog is its ability to define rules, using "if" statments and "and" statements, to infer further facts. Here are some facts and rules:
    jim is parent of bob
    eileen is parent of bob

    jim is male
    eileen is female
    SOMEBODY is offspring of SOMEONE
        if SOMEONE is parent of SOMEBODY
The question
    offspring of jim
will cause Prolog to answer
    OFFSPRING = bob
    ?

When we add the rule that
    SOMEBODY is mother of SOMEONE
        if SOMEBODY is parent of SOMEONE
        and SOMEBODY is female
we can then ask the question
    mother of bob
and receive an answer
    MOTHER = eileen
    ?

Note that in this case Prolog had to match up two separate facts to come up with an answer. The ability to match up many separate facts by searching the database both backwards and forwards is the key to Prolog.

If you ever wondered why the Japanese in 1980 chose Prolog as the dominant language for their Fifth Generation Project ... well, now you know!

The Wall Street Journal reports that several banks either have or plan expert systems to help make small or medium-sized business loans, including Security Pacific Bank in Los Angeles, Wells Fargo in San Francisco, Chemical Bank and Manufacturers Hanover in New York, and Wachovia Bank in Winston-Salem. As the headline puts it: Your loan officer next time may be an 'expert' on a disk.

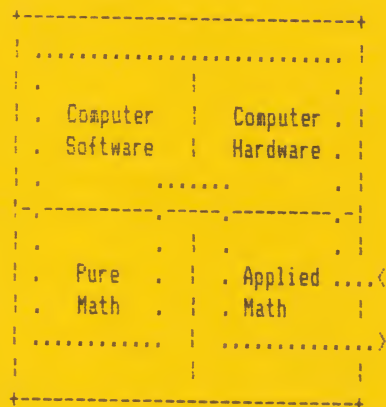## Language of Science

Donald Forbes - JACG

The language of science, as we all know, is mathematics. But how can we put it to use?

If you want to find a way to organize all your computer projects into a meaningful pattern, then this scheme might help you, just as it has helped me.

Here we will try to fit our computer projects into a model of the mathematical sciences (including the computer sciences). You can put your own projects into the framework. I have used my own just as an example.

Here is a model of the mathematical sciences, which you may have seen in earlier issues of the newsletter. We can look at the mathematical sciences as a black box with an input and an output port. The black box is divided along the bottom into pure math and applied math, and into computer software and hardware along the top. Processing begins at the input (or problem) port and then runs from applied math to the computer hardware, to the software, to the

mathematical algorithms, and then backwards to the output (or solution) port.

```
+------------------------------+
!  ............................  !
!  .                        .  !
!  .  Computer   !  Computer .  !
!  .  Software   !  Hardware .  !
!  .             !  .......   .  !
!-.----------.-----.---------.-!
!  .         .  !  .         .  !
!  .  Pure   .  !  . Applied ....<
!  .  Math   .  !  . Math    !  !
!  .         .  !  ............>
!  .         .  !  .         !
+------------------------------+
```

We can use this model as a framework. To the right of the box we can make a list of the projects that happen to be of interest at the moment. Here, for example, is my list of applications (both saleable and unsaleable) in no particular order. It may give you some ideas for a list of your own.

Applications: genealogy and family history, statistical analysis, financial analysis, econometrics, mathematics of esthetics, computer music, database of my books, database of wife's recipes, home heating analysis, paying tutorials, wordprocessing instruction, household inventory, math expert system, symbolic processing, home banking on-line, programming as mathematics.

This, in a sense, is a list of computer goals. What hardware and software is now available to achieve some, or all, of these goals? And how do we plug these resources into the four boxes in our model?

It seems logical to list the available applications packages in the "applied math" box. At this point we should make a clear distinction between two types of software. We must differentiate between application packages (which are single purpose "end products"), and multiple purpose "tools" such as computer languages.

Here is my list of application packages grouped under seven different categories. You, of course, can substitute your own.

SPREADSHEETS: Twinh, Lotus 1-2-3 tutorial, PC-CALC, Forth spreadsheet, Mathematical spreadsheets, Atari Syncalc.

GRAPHICS: B/W, Color, valFORTH turtle graphics, Ladybug

COMMUNICATIONS: JCAT modem, Atari software, on-line banking

DATABASES: Reflex, PCDBMS package

WP: Leading Edge WP, Atariwriter, Brodie Forth WP

AI: Expert systems (book), Turbo Prolog, ESIE, Analyticalc, X-Lisp

MISC: Fractals, Atari Calculus Demon, Forth 8087, Forth assembler, Atari B-Graph, Turtle graphics, statistics library, math library

These packages fill out the Applied Math box.

What goes into the Computer Hardware box? In my opinion there are two sets of items that belong. First is the actual hardware. Secondly, the computer software that is transportable across the hardware (in other words, Forth).

Here is my hardware and Forth packages:

HARDWARE: Atari 800, Leading Edge model D, Hewlett-Packard handheld HP-12C calculator, TI programmable calculator.

FORTH: F-83, Uniforth, PC Forth, MVP Forth, IBM Fig-Forth, Fifth, Atari Forths (valFORTH, OS Forth, Team Forth, turbo-4th, Mullarkey Extended Fig-Forth).

Now for the Computer Software box. Here we can place the available software languages -- the "tools."

LANGUAGES: BASIC (Atari, DOS, IBM, GW), DOS (PC, MS, Compaq, Atari), Pascal (Turbo), Assembler (Atari, Atari Forth, IBM Forth, IBM), Graphics (Forth, BASIC, Pascal)

In the Pure Math box we can place our mathematical algorithms (which model the universe and everything in it). Here is my listing:

ALGORITHMS: Calculus (Atari Calculus Demon), complex numbers, group theory, statistical analysis, differential equations, three-dimensional geometry.

So there you have one person's list of interests and resources. All I need is more time. Now you can sit down and make up your own lists.

If there is anything on my lists that interests you, I will be glad to (lawfully) share it. Perhaps together we can create the ULTIMATE expert system ... or inventory program ... or whatever!

```
*****************
*     J        *
*GIVE A BIT!!*
*     C        *
*     G        *
*****************
```

FROM JANUARY ZMAG
COMPUTER INQUIRY III

The FCC is considering reregulating the packet-switching networks like Telenet, Tymnet, Compuserve, The Source and PC Pursuit. This could result in additional costs to the user. This is excerpted from Infomat magazine.

FREE LOCAL ACCESS TO PACKET
SWITCHING NETWORKS MAY BE ELIMINATED

By Tim Elmer

The Federal Communications Commission (FCC) will vote on a proposal to reregulate packet switching networks that, if approved, would eliminate free local telephone access to those networks.

"If this occurs, it might eventually double or triple the costs to those using packet switching networks to access commercial on-line databases and information services and triple or quadruple the costs to those using Telenet's PC Pursuit," said Philip M. Walker, vice president and regulatory counsel for Telenet Corp.

"In terms of cost impact," Walker said, "if we had to pay local access charges, it would cost us about $3.60 an hour at the originating end, for calls made by users to on-line databases and information services like CompuServe and The Source."

"And with PC Pursuit, for which we have out-dial modems, we would have to pay not only $4.60 per hour access fees at the originating end, but also $4.80 at the terminating end, a total of about $8 or $9. Obviously, to survive, we would have to add those additional charges to our current fees and pass them on to our consumers," Walker said.

That would almost certainly spell the end of PC Pursuit, and it would likely put out of business not only many independent packet switching networks but also many on-line databases and information services.

FCC approval of changes being considered in Computer III, Walker said, "would really have a major impact on anyone using a packet switching service to access online bulletin boards, databases, or information services aimed at the residential user. They are just going to get creamed if this happens.

Walker said that it was not clear exactly when the FCC would vote on the proposal, but that it would probably be the latter part of January or early part of February 1987.

"They are moving very fast on this," he said.

EDITORIAL BY ALAN R. BECHTOLD

At the risk of over-simplification, I think I should first describe just what a packet switched networking service is. These are the services you use to access online databases and commercial online services, such as CompuServe and The Source, with just a local telephone call. Once you call the local Telenet or Tymnet number, for example, and a connection is made, you are then connected with a computer that puts you in communication with the online services with which you wish to communicate.

This computer is handling a number of calls into the main system computer at the same time. It takes information you send and delivers it in "packets" to the proper destination, picks up information from the online service computer you called, and sends it, also in "packets" because this allows the network's computers to offer protocol conversion and handle several ongoing communications sessions at the same time.

FCC regulations allow AT&T and Bell Operating Companies (BOCs) to engage in packet-switching network operations, but they must also maintain completely separate accounting of their voice and packet switching operations. They must also offer free local-calling access to their lines to any competitors engaged in the packet switching service industry.

The above regulations have allowed Telenet and Tymnet, among others, to operate at a reasonable cost in a competitive atmosphere. This is a case of regulation of a business actually resulting in increased competition and lower prices to consumers.

As things stand now, you can call any local Telenet or Tymnet access number and use these services to inexpensively access such only services as CompuServe, The Source, Delphi, and countless others. In addition, GTE's new PC PURSUIT service now offers you the access, through their Telenet packet switching service, to literally hundreds of local bulletin boards in cities all across the country--for the flat charge of $25 per month.

But, the FCC is now being asked to REREGULATE this segment of the communications industry, eliminating the FCC requirements that AT&T and BOCs keep separate accounting

records of their voice and packet switching services, and eliminating the stipulation that the BOCs and AT&T must offer their competitors in the packet switching business free access to their local telephone connection lines.

The idea is patently ridiculous.

Mark Fowler, Chairman of the FCC, has been hailed by the press as a "air-market zealot." The chances are very good that he views this proposed reregulation as the magic road to increased competition and a fairer pricing for consumers.

Unofficially, the word is out that the FCC advisory committee now considering this matter is indeed leaning in favor of the proposed reregulation of the packet switching industry. If the committee recommends these changes, it's likely that a majority of the five voting members of the FCC will vote in favor of the changes.

The proposed reregulation could very well spell the death of PC PURSUIT. Because GTE also uses dial-out modems at the other end of their Telenet connections for PCP service, the company would be forced to pay an hourly charge at BOTH ends of the phone line -- totaling up to $9 per hour. These fees would have to be added to the flat $25 per month that GTE now charges for access to PCP. It would simply make the final cost to PCP costomers too high for the service to remain practical and affordable.

So, this is ONE TIME you MUST use your word processor to produce some letters opposing this proposed reregulation! Write to:

Honorable Mark Fowler
Chairman of the Federal Communications Commission
Washington D.C. 20554

Refer to Computer Inquiry III in your letters. State clearly, in your own words, that competitive packet switching services should not be reregulated or subjected to carrier access charges, and then explain why not. Tell Mr. Fowler that reregulation of packet services will completely destroy the existing fair market for these services, and eventually increase costs, not DECREASE them.

And Hurry! I have heard this matter will be going before the FCC for a vote in the latter part of January or early part of February. Time is running out.

Write today!

NOISE from NOYES
or
User Groups - What??

D.B. Noyes - JACG

I know, I told you last month that I was going to write of my interview with the editorial staff of the ATARI EXPLORER; however, I'm going to exercise my own editorial license (please don't ask me where I got it!) and change my January column to my reaction to an article entitled "How to Win Friends and Influence User Groups" by David D. Busch, which appeared in the Nov/Dec 1986 issue of the ATARI EXPLORER on pages 80 and 81. So much for a long sentence! If you don't have a copy I would suggest that you purchase one (yes, I feel that the magazine is worthwhile to subscribe to).

Mr. Busch, in his first paragraph, does state that user groups have been around..."to exchange ideas and discuss problems."... Unfortuately, everything after his first paragraph is nothing more than a failed attempt (in extremely poor taste) at humor at the expense of user groups. The remainder of his article gives what he feels are pointers "to make it to the top of your local club." In his ridiculous effort to be funny and cute he infers that the act of asking a question (unless with bluff and catchwords) will make one out as "dumb". He further suggests that anything one says be laced with PEEKS and POKES; that one's programs have dummy lines in it - all to impress others. Well, Mr. Busch - that's just so much ****.

The sad thing about this article (beyond the fact that it was published) is not so much that the sensibilities of user group members have been unjustly hurt, or that an absolutely false impression of their activities has been painted, and that their good work and reasons for existence have been held up to ridicule; but that any new user, or any user unfamiliar with a REAL user group, may, on the strength of this article, consider not joining a user group. And what is a user group for - if not for users? And who needs user groups, certainly not smug "know it alls" or those seeking to create such an impression (as portrayed by Mr. busch); but (among others) those very people who will be "turned off" by this absurd article. I don't question Mr. Busch's right to write his article, nor ATARI EXPLORER's right to publish it; but wherein is the WISDOM? The article is negative, false and irresponsible - a thoughtless swipe at the tens of thousands of user group members who contribute unselfishly to the on-going success of thousands of user groups. I certainly hope that Mr. Busch's next article is an apology to all who have been maligned by his article!

I apologise for sending in last month's 'Doctor Dead' column in a little late, but I got two files mixed up.

Ah, all the BAD software I have bought ... not much. The Graphics Magician is by far the worst (see elsewhere in this issue i.e., "The Incompetent Magician"). Here is a list of stuff to stay away from or at least be careful with.

Electronics Boutique Disks. Sold in one-, two-, or ten-packs, I have found more errored disks in their packages than mentionable! Actually, I found three bad in one pack and one in the other. That is BAD. I have heard from Joe Kennedy and Bill Martin that their generic MEI disks ($.29 each, 100 minimum) have had only one bad in 300 and that was a reverse side!

MEMTEK Disks. Not as bad as the above, but with minimum use, they both died on me 6 days after the warranty ran out. Typical, huh? Overall, they are okay if you do not reformat them on different computers once or twice.

DOS 3.0, by Atari. This was a good effort, but wasn't what the public wanted and was way out of line. To quote Antic magazine (by Eric Clausen, in July '85 issue) "... the DOS 3.0 file management is a serious flaw. It stores files in 'blocks' of 1024 bytes as opposed to the DOS 2(and compatibles') 128 byte 'sectors.' This can be wastefully inefficient. If you save a file of 1025 bytes(one block + one byte),DOS 3 will save it as 2 blocks, wasting 1023 bytes of disk space! This product should be avoided. It's a shame that so many newer Atari users have been stuck with it ..." And Et Cetera (such as incompatibility with DOS 2, with a "Convert DOS 2 to DOS 3" but no way to go the other way!).

Gemstone Warrior, by SSI. This is overall a good game with nice graphics and great sound, but it is overly monotonous and its big flaw is the save feature. You can only save one game, and when you save, it ends your game and returns to the main menu. That is not what I call a "true save." Also, when you hit the BREAK key, it automatically saves your game and returns to the menu. The keys near the BREAK key are essential to the game, and many a time I have accidentily pressed it. You must resume the saved game when playing again or it is erased. Hah!

Starfighter joystick, by Suncom. A very good stick, but it's not very durable at all. The inner stick snapped after six weeks (the warranty ran out in four). It is still my favorite joystick, but I have to be very delicate with the tiny babe.

OKIMATE 10 Printer ribbons by Okidata. These last for four days and then they leave blank spots all over. The color ones are OK. The black are not dark enough even at the darkest tint selection. The printer is a goodie, though.

Well, have I complained enough? No? Yes? Write me! I'm on the back of the newsletter! Well, at least my address is; Editor Dave wouldn't let me inside the printing press!

Next time: I have no idea. Why don't YOU write? Our Editor Dave Noyes would love it ....

---------------- - Dr. Dead

THE INCOMPETENT MAGICIAN

The Graphics Magician Picture Painter
Tom Pluck - JACG

Another old "paint" program for the Atari computers is The Graphics Magician. It looks like an excellent drawing program when it is not in the computer, but there is really more than meets the eye and this is not as good as it seems.

It is a joystick-oriented program, but the Atari touch-tablet can be used if you have the original pen that came with it because the little button on the pen is essential to the program. My pen's button doesn't work anymore, so I must use the joystick. You need 48k to use this, even though I am trying to keep you away from it.

What's good about this program? For one, you can use the standard Atari text set to add words to your picture. That is, if the colors you chose will allow them to be understandable. Once you pick the four colors you will use, it creates 71 blends of the colors, allowing 75 colors at once. You can also allow a certain four colors for one part of the screen, and another group for another part. These are called "scan-lines" by Penguin Software, and there are 192 of them. This allows 256 colors on the screen at once, lus the 71 blends for each set of four colors. So, since there is a maximum of 192 scan lines, with 71 blends each, so a lot of colors can be used. Another good thing is that it does not save the screen,

but what you did, so you can go back & forth if you made a mistake, so it's like an infinite UNDO command. This allows limited animation, which is much worse than they say (actually, you can do better with BASIC's PLOT and DRAWTO.

Well, that's ALL that's good about it. You cannot draw freestyle; you can only draw straight lines, which makes it hard to draw spherical or round objects. Another problem is that when you fill in an object (it must be the background color, so you cannot fill in over something. The documentation is a joke. You cannot get a disk directory without saving your picture in a totally different format than anything else ever made (or 62 sector Micropainter format) and go back to the main menu. It has special handler programs for loading pictures in BASIC, but it's very hard to anything but just look at the picture- no sound, text in the text window, etc., in fact it's impossible.

Please take my warning. Penguin Software's games are excellent, but The Graphics Magician Picture Painter has many shortcomings when it comes to the Atari (the Apple version is supposedly excellent).

Well, in February and henceforth, I'll review The Print Shop Companion, The Temple of Apshai Trilogy, two books, and maybe Star Raiders II. If you review games, PLEASE do not review the first two products I mentioned! Star Raiders II is all yours!

Thanx agin, and have much enjoymint wit yo Atari!! Doctor Dead, dee fab-yoo-luss mispeller

DECEMBER'S MEETING
--In Brief--

-Reported by Tom Pluck - JACG

The December meeting was the second held back at good ol' Bell Labs. After the Q & A session and Pres. Joe Kennedy's opening remarks (by the way, it was his first official meeting as Pres.- Congratulations, Joe!) Bill Brandt demo'd his program 'Stuff-in Stories,' a MADLIB with a twist. There are ten stories to choose from, which include Holiday and Cooking. It is still in production, but when done it will be in the JACG disk library.

Secondly, Oscar Grannison showed us XLent Software's Page Designer. This program is used for making layouts, reports, newsletters, etc. It allows graphics from Typesetter, Rubber Stamp, and Micropainter compatible files on the screen, and has an excellent art program built-in. It can draw: circles, spheres (filled-in circles), freestyle drawing, and lines. It performs all of those features quickly and also has 40 or 80 column text on the screen (and it was easy to read!). Oscar passed around some sample printouts that were amazing. Oscar also compared Page Designer to the old Atariartist, the program that comes with the Atari Touch Tablet.

Last but not least, Tom Pluck reviewed JingleDisk by HiTech Expressions. This program has a little Christmas "simulation" with great graphics and music and can also print out three kinds of Christmas cards if you have a: Atari XMM801, Epson LX80, MX80, MX100, Okidata 192/193, 92/93, Panasonic 1090/1091, or Star Gemini SG-10 or 10X printer. Its main feature is making Christmas cards-on-a-disk, which essentially is the Christmas graphics/music "simulation" with a three line message of your choice at the beginning. Then you can send them out to all yer fellow Atarians! Tom said it only costs $7.99 at Toys R Us and even less through mail order catalogues that advertise in Antic magazine.
Announcements:

Our Editor Dave Noyes wants more articles! He also said to tell stores if you saw their ad in the JACG Newsletter when you buy something.

Treasurer Shree Vandenberg announced that she and her husband have made silk screened T-shirts with the JACG logo on them in four styles. She will have a few to show at the January meeting and they will cost $5. They need at least 12 orders to order a size; at least 12 people must ask for Medium size for them to order any Medium, etc.

This month was raffle month. Everybody donated stuff!

Raffled off were:

The Print Shop Graphics Supplement #1, by Eclipse Software Productions, donated by Eclipse Software Productions.

Citywriter, by Software City, The Music Studio by Activision, and the ST Logo Guide were all donated by Art Leyenburger.

Zoomracks, by Quickview, Cashflow, and Holmes & Ducksworth were all donated by Software Spectrum.

The Analog Index and a book about Z-80 processors were donated by Sam Cory.

A few people left before the raffle and lost out on their winnings. You know who you are, and you missed out on some nice things!

I know it's a little late, but HAPPY NEW YEAR!!!

REPEATING DECIMALS

byKenneth J. Pietrucha

In the December 1984 J.A.C.G. newsletter I introduced you to repeating decimals by way of a program written to do division of fractions to any decimal length. Rather than re-print this program, I have used a version I found in the December 1984 issue of The Mathematics Teacher. The program has been adapted to my specific application as you will soon see.

To understand the concept of repeating decimals, start with the fraction 1/13. If you divide 13 into 1, you will get .076923076923... with a six digit group of numbers repeating over and over.

If you run the program for other fractions, you will eventually discover numbers which repeat only after an initial starting block of numbers. Take the fraction 1/88, the answer to this division is .0113636.... The two digit block 36, repeats only after the starting block .011.

The fractions used as examples started to repeat very quickly, so I was able to demonstrate a point. These examples could be done on a calculator. The fraction 1/97 repeats after 96 digits. The size of the denominator is not always a clue to the length of the repeating decimal. Some fractions with large denominators begin to repeat digits after a small number of divisions, such as 1/4649 which repeats after 7 digits. My all time favorite is 1/14641 which starts to repeat after 2662 digits. You can't see that on your calculator!!

When you look at a print out of a large number, it is very difficult to determine when the cycle begins to repeat. If the number has a starting block, it is even more difficult to spot a new cycle.

Compared to my December 1984 program this one is "new and improved" and will first calculate the digits in the starting block. After calculating the first cycle, the program will stop and give you a digit count.   When does the program know when to stop ? Remember this program is doing nothing more than the equivalent of long division, so when the remainders begin to repeat, the cycle is repeating.

The procedure for calculating the length of the starting block comes from the November 1985 issue of Byte in and article entitled, quite naturally, "Repeating Decimals". The explanation is beyond the scope of this article, but in simple terms, the program keeps track of the number of times the denominator, or bottom number, of the fraction is divisable by 2 and 5.

In the example 1/88, the number 88 can be divided by 2 to get 44, 44 divided by 2 gives 22, and 22 divided by 2 gives 11. The last division by 2 is the last one to give an integer or whole number answer. Since 11 is not divisable by 5 without a remainder, we have only three possible divisions and therefore three digits in our starting block (.011 starting block).

Some fractions do not repeat at all and will therefore be no fun. The fraction 1/16 for instance is a very boring number. After doing the necessary divisions, the decimal equivalent is .0625. If the division is continued all you will get is a string of zeros.

The only requirement for using this program is that the fraction should be reduced to lowest terms.

```
1   REM ****************************
2   REM *   REPEATING DECIMALS    *
4   REM *BY KENNENTH J. PIETRUCHA *
6   REM *  J.A.C.G.****4/22/86    *
8   REM ****************************
10  GRAPHICS 0
20  PRINT "ENTER NUMERATOR": INPUT N
30  PRINT "ENTER DENOMINATOR ":
    INPUT D
32  GRAPHICS 0
35  PRINT N;"/";D
40  Z=D
50  I=Z/2
60  IF I=INT(I) THEN LET Z=I: L=L+1:
    GOTO 50
70  I=Z/5
80  IF I=INT(I) THEN LET Z=I: L=L+1:
    GOTO 70
90  PRINT :PRINT "STARTING BLOCK
    HAS ";L; " DIGITS ":PRINT
100 A=INT(N/D)
105 IF N>D THEN PRINT A; ".";
```

```
110  I=0
112  IF N<D THEN PRINT ".";
115  I=I+1
120  RM=N-D*A
125  IF I=L+1 THEN LET V=RM
130  N=(N-D*A)*10
140  A=INT(N/D)
145  IF I>L+1 AND RM=V THEN PRINT :
     GOTO 200
150  PRINT A;
155  IF I=L THEN PRINT " ";
160  GOTO 115
200  PRINT :PRINT "REPEATING BLOCK
     HAS "; I-(L+1); " DIGITS"
```

If you want to get a printout of your results, add lines 33 and 210.

```
 30  POKE 838, PEEK(584220: POKE 839,
     PEEK(58421)
210  POKE 838, PEEK(58374): POKE 839,
     PEEK(58373)
```

Line 33 sends everything that appears on the screen to the printer. Regular LPRINT statements will not work. Line 210 puts everything back to normal.

KAPREKAR'S PROBLEM

by Kenneth J. Pietrucha - JACG

Every so often I find a number curiosity which I feel deserves some investigation. Like Ulam's Problem, Kaprekar's Problem is named after its discoverer, D.R.Kaprekar, an Indian mathematician, who in the year 1940 B.C. (before computers), discovered some interesting numbers.

The best way to explain his problem is by example. First take any three digit number and arrange the digits in order from smallest to largest. Take this number and reverse the order of the digits to give us the the largest possible number which can be formed using these digits. Subtract the smaller number from the larger number to get a third number. With the third number repeat the process just described. If the procedure is repeated, it will eventually yield the number 495, which will repeat itself over and over again.

Here is what happens when you perform these operations on the number 529.

```
952 - 259 = 693
963 - 369 = 594
954 - 459 = 495
954 - 459 = 495 etc.
```

The same thing happens with four digit numbers, where the number 6174 repeats.

I have analyzed numbers up to ten digits using the program listed in this article and have not found any other repeating numbers. It seems so far, only three and four digit numbers repeat with 495 and 6174 respectively.

Numbers with other than three or four digits show patterns of repeating in groups. When I analyzed five digit numbers, I found the numbers repeating in a block consisiting of 63954, 61974, 82962, 75933. Other numbers of different lengths gave similar results. Sometimes there was more than one group of repeating blocks. I am not going to spoil your fun by telling you any more. Try it yourself and see what you can find.

```
1    REM KAPREKAR-PROBLEM
2    REM KENNETH J. PIETRUCHA
3    REM J.A.C.G.**4/23/86
5    DIM Z$(15),Y$(15),
W$(15),R$(15),E$(15)
6    DIM A(15)
10   GRAPHICS 0
20   PRINT "ENTER STARTING
     NUMBER ":INPUT Z$
25   N=LEN(Z$)
30   FOR X=1 TO N
35   A(X)=VAL (Z$(X,X))
45   NEXT X
50   X=0:L=0
55   X=X+1
60   A(X)>A(X+1) THEN LET
     Z=A(X):A(X)=A(X+1):
     A(X+1)=Z
65   IF X=(N-1) THEN LET
     X=0
70   L=L+1:IF L=(N*N) THEN
     GOTO 100
75   GOTO 55
100  FOR X=1 TO N
105  S$=STR$(A(X))
110  Y$(LEN(Y$)+1)=S$
115  NEXT X
120  K=VAL(Y$)
121  Y$=""
125  FOR X=N TO 1 STEP -1
130  R$=STR$(A(X))
135  W$(LEN(W$)+1)=R$
140  NEXT X
145  P=VAL(W$)
146  W$=""
150  IF P>K THEN LET D=P-K:
     PRINT P;" - ";K;
     " = ";D:GOTO 175
```

▶ 23

```
155 D=K-P:PRINT K;" - ";
    P;" = ";D
175 E$=STR$(D):
    EL=LEN(E$):IF EL<>N
    THEN D=D*10
200 Z$=STR$(D)
205 IF RPT=D THEN PRINT
    "REPEATING":PRINT :
    PRINT :GOTO 20
207 RPT=D
210 GOTO 25
```

Analysis of the program is as follows. After the number is entered as a string in line 20, its length is measured. The string is turned into ididual digits and each digit is assigned an A(X) variable.

Next, the individual digits are arranged in order from the smallest to the largest by a "bubble" sort in line 60. This is an interesting and important part of the program, so bear with me for a moment. If X=1 then we will be looking to see if the first number A(X) is greater than the second number A(X+1). If it is larger than the first, the number is assigned the variable Z as a temporary storage area while the second number A(X+1) moves into the space that was formally the first number [A(X)=A(X+1)]. Now we can move the original number, which was stored in Z, into the number two position [A(X+1)=Z] and the two numbers change places.

The program now looks at the next two numbers (second and third), and does the same type of exchange. When it reaches the end of the line, it starts over. Meanwhile, line 70 is counting each trip through the loop L and when it goes through N squared times (worst case), then you know everything is in numerical order. Pretty neat, huh?

Lines 100 to 115 take the individual numbers and turn them back into string variables so they can be put back together or concatenated in line 110. We get back one number in line 120 with all the digits in ascending order.

Lines 125 to 145 do the same thing as lines 100 to 115, except that it does it backwards so that we wind up with a number which is the reverse of the number we had previously.

The rest is easy. In lines 150 and 155 the program checks to see which is the larger number. It then subtracts the smaller from the larger and prints out the two numbers and their difference.

The new number we get when we subtract the two is converted back into a string variable in line 200. It will eventually be fed back to line 25, where it repeats the procedure.

After I wrote the program, I had only one major problem. When using numbers with two digits, the program is suppose to enter a loop where the number 9, really 09 as a string, should reverse itself and become 90. This didn't happen and 9 became 9 and when it was subtracted it became zero. It should have been 90 - 9 = 81. To correct this, I added line 175. It knows, from previous measurements in the program in line 25, that we are working with a number with so many digits; in this case it has two digits. The number of digits in our answer is compared to N. If it is less than N, the number is multiplied by 10 or in effect a zero is added at the end of it. This procedure is only needed for two digit numbers.

I added lines 205 and 207 to trigger when it recognizes that the numbers start to repeat. It doesn't recognize when blocks of number start to repeat, that's for homework.

■ ■ ■ ■ ■ ■ ■ ■ ■

Where the New Software Will Come From
An Editorial by David Plotkin

It has become increasingly obvious that the production of new, useful software for the 8-bit Atari computers has slowed to a trickle, if not ceased altogether. By useful, I mean utility and productivity programs such as spreadsheets, databases, and other such programs which enable you to do substantive work on your Atari. This category does NOT include games, production of which has also slowed, although some new ones continue to be announced. This editorial will attempt to analyze why the software flow for the Atari home computers has reached the current state, and where any new software is going to have to come from.

The question of availability of new software is an important one. Sales of software tend to drive sales of hardware (computers), and so an important measure of the viability of a home or business computer is the flow of software. The classic example of this is the case of the Apple II and Visicalc. As the story goes, people actually went out and bought Apples (which, remember, sold for over $2500 in those days) to have the machine that the spreadsheet Visicalc ran on. This maxim is still true today. The Amiga computer from Commodore is probably the most technologicially advanced home computer available. Yet it languishes, and sales lag far behind the Atari ST and Apple MacIntosh. Reasons for this have been proposed
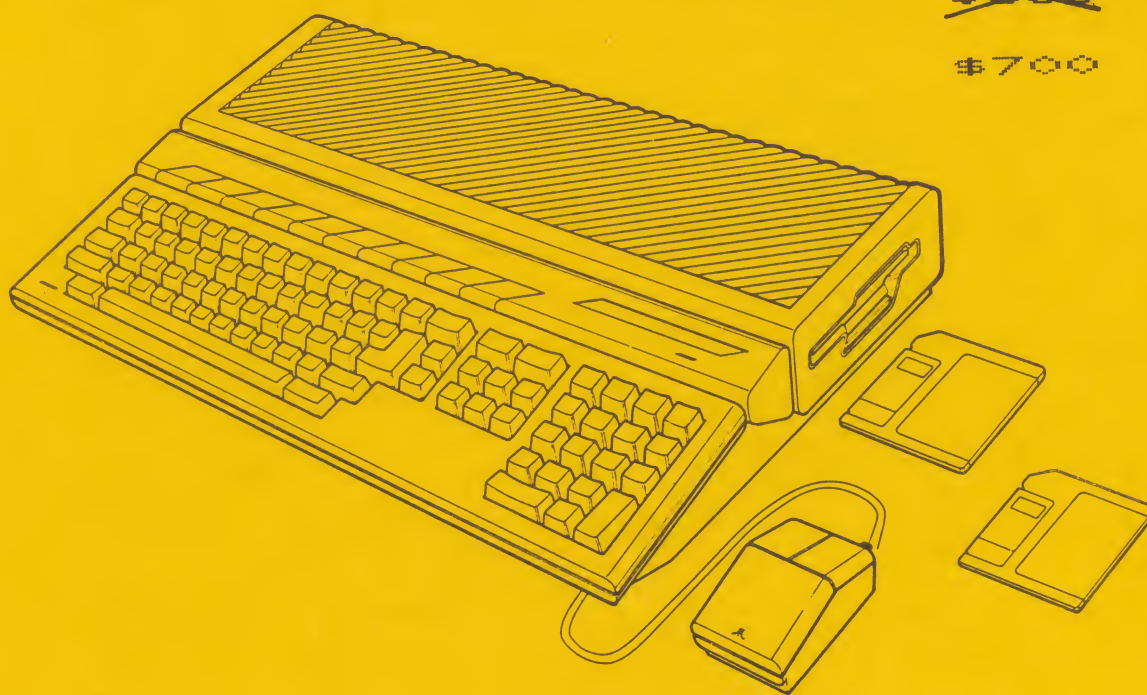
in the literature which supports Commodore machines: the machine is too expensive, or it is marketed poorly. These are contributing factors, no doubt. But I think there are a lot of people who would willingly pay the high price of the Amiga if there was something they could do with it. The real problem is that there is no software, and this situation doesn't appear ready to change in the near future. So software is the driving force behind computer sales--as you have heard, without software, computers are just doorstops. Now, there is a lot of software available for the Atari. However, very little of it fits our definition of "useful". Also, human beings like new things--witness the popularity of Christmas. It is very depressing to search the catalogs and shelves of the software stores for a new piece of software to take home and play with. As the months (and years) go by with little new software, owners have the tendency to give up and maybe even move to another machine which has a more active software producing community. At the very least, they may stop using their Atari regularly.

So--there is not very much "useful" software available for your Atari, and little likelihood for the production of more. In contrast, the Apple II has a multitude of productivity programs, and new programs are constantly being announced. Yet, to hear tell, the Atari is a more advanced computer, possessing more sophisticated sound and graphics. Why the difference? Part of the answer has to do with history. The Apple computer was available about one and a half years before the Atari, and had a sizeable installed base when the Atari first appeared on the market. Despite the fact that it was VERY expensive, it was virtually the "only game in town". Software developers, encouraged actively by Apple, began writing programs quite early on. The historical reputation of Atari as the manufacturer of the 2600 game machine also hurt. I would guess that every Atari owner at some time has had to explain that his or her cherished computer is "not a toy!". Atari was the first of the computer makers to try mass-marketing techniques, making their computers available from places such as K-Mart and Toys-R-Us. This alienated the computer stores, and also helped convince people that these computers were not to be taken seriously. Game software prevailed, and the soft voices of the people who realized that their Ataris could also do "serious" work were lost in the roar of explosions and sound effects.

Another part of the answer has to do with the technology. The Atari does support more advanced sound and graphics--which unfortunately helps promote the image of it as a game machine. But the Apple is an "open" system--that is, there is easy access to the system buss. Even today, Atari computers have no way to add hardware "cards". These cards can add a multitude of features that the basic system didn't have. Need more sound? Use a

sound card, capable of 6 voices in stereo. Need more memory or 80 columns? Buy a card and add it in. You get the idea. The Apple computers had 128K of memory and 80 columns early on, and current cards can expand the Apple to 4 megabytes. Atari is just now beginning to catch up, with the announcement of additional memory and Atari's 80 column box. Thus, in the features which are important to productive uses of a computer, Apple has an almost insurmountable lead.

Finally, there is the question of the programming languages. Pascal, Fortran, a compiled Basic and C were available very early for Apple owners. Atari owners had Basic A+ (now Basic XL and XE), but until the advent of ACTION, there was no fast, easy-to-use language for Atari programmers. This explains in large part why the programs in the Atari public domain are almost all written in Basic, and a lot of them are pretty mediocre.

Where, then, does this leave us? We have the productivity series from Synapse (Syncalc, Synfile+, etc.) as the primary productivity tools for the Atari, as well as some packages from other companies, some good, some not so good. Synapse is no more. Broderbund, Synapse's parent company, does not appear to be actively supporting the series, even to correcting some of the nasty bugs which crept into the 130XE versions of the programs. And don't hold your breath for Broderbund to upgrade the programs to 80 columns. Most of the other major software houses, including some that have historically supported the Atari, seem to be also ignoring us.

So far, I seem to be painting a pretty grim picture. Let me put this in perspective. What I am saying is that there ARE programs for doing useful work on your Atari available. Many are quite powerful, and some are very cheap--even to the cover price of a magazine and a few hours of typing. But I doubt that many of the older commercial programs will be updated for the new features of the Atari computers, and I also doubt that much effort will be put into publishing new programs. There ARE exceptions. XLENT Software has their line of printer utilities, and just produced a new word processor. Its claim to fame is the ability to include "Typesetter" graphics in the text and use multiple fonts. Batteries Included has consistently been updating "Paper Clip", which is the word processor I happen to be using for this article. And, of course, OSS has BASIC XE.

The most promising source of the new software necessary to keep the 8-bit Atari line alive is the users themselves. Very early on, Atari made an effort (APX: Atari Program Exchange) to market user-written software at good prices. Chris Crawford's classic, "Eastern Front", was first published this way, along with a multitude of other games and utilities, including the C programming

language and a two-drive version of Pascal. I still use
Sheldon Leemon's Instedit, a character set editor, and
play "Caverns of Mars" on occasion. APX did encourage
programmers to get working and made these programs
available for very little money. But APX was a victim of
the Atari upheaval, and is no more. ANTIC Magazine now
publishes a catalog of some of the old APX line, and
includes some new material as well. Unfortunately, the
prices have gone up, and the standards for acceptance of
programs are very stiff. Provided a suitable way to
distribute programs can be found, however, the users are
still the best source of new software. This is especially
true of the people reading this editorial--the customers
of OSS. You are the people who take programming
seriously. You must: you laid out quite a lot of your
hard-earned dollars to purchase OSS products. In general,
these products are programming languages. MAC65 is quite
likely the best assembler ever published for an eight-bit
computer. It is quite possible to produce very good
software using BASIC XL, BASIC XE, and ACTION. Many of
you have seen my ACTION games in ANTIC and ANALOG, and my
commercial "MINIATURE GOLF PLUS", available from XLENT
Software, was written in BASIC XL! With runtime packages
available for both BASIC XL and ACTION, they are prime
candidates for programming new software.

The question then remains: if you have written a good
utility or productivity program, how do you get it out
there and maybe even make a little money from it? OSS
will be announcing the details of a new software line,
entitled "BareWare" (racy, huh?). Its primary purpose
will be to make new software, primarily written by OSS
customers, available to others at a reasonable price.
Look for the announcement in this newsletter.

We have analyzed how the state of Atari software has
gotten to where it is now, and looked at some hopes for
the future. I firmly believe that the majority of useful
software will come from all of you out there. You have
the tools--the excellent programming languages and
utilities from OSS (and others). And OSS will provide the
distribution. It is time for all of you (and me) to get
busy and begin turning the software ideas that have been
bouncing around our brains for a while into reality. The
Atari community is depending on us, and OSS can't do it
all alone.
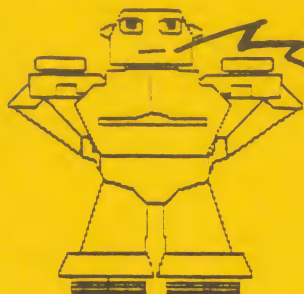
YOU BETTER 'GIVE A·BIT'
THIS MONTH OR I'M GOING
TO COME AND GET YOU!!!

POWERSTAR

A Review of the
Demo Disk

by - Geoff Noyes

Powerstar is a 16K (you can run it on a 600XL) graphic
adventure available on cartridge. The adventure takes
place in the 21st Century, around an orbital nuclear power
plant. It took the developers over 3000 hours to make
Powerstar. Powerstar has 254 different screens and a
vocabulary of about 250 words. For each of the 63
different locations it has four different views (which are
north, south, east, and west). Overall it is a great game
with fairly good graphics. If five or more members order
Powerstar (I'll give the information to Gary Gorski) they
can get 50% off of the retail price of $34.95 (that means
a cost of $17.48). Powerstar is a product of:

Pandora Software, Inc.
177 Carlton Lane
North Andover, MA
01845
(617) 681-8440

Upgrade Your Power Strip For Surge Protection

By Jim Parks

A multiple outlet power strip is one accessory that is common to almost every computer enthusiast, and by following the simple instructions here, you can upgrade your power strip to include surge protection that will equal those bought commercially.

The secret of surge protection is the **Metal Oxide Varistor (or MOV for short).** This device provides excellent protection against spikes and over voltages. Simply stated, once the voltage exceeds the MOV's rating, the excess voltage is shorted to ground.

To upgrade your power strip, start by unplugging and disassembling the case of your strip: most are secured with screws or rivets. Riveted cases may be drilled and later secured with sheet metal screws. At the point where the cord enters the case, the outer insulation of the cord should be skinned back exposing the black, white and green wires attached to the outlets. Scrape off a little insulation from each of the three wires (carefully, don't cut the wires in two) and lay the power strip aside.

NOTE: The MOV's leads are not insulated, so plastic tubing or heat shrink tubing must be used on any exposed wires.

Study the diagram in **Fig. 1** and solder the MOVs to the wires as shown. Then, with electrical tape, cover any bare wires and connections not protected by insulation. Carefully re-assemble the power strip so as to avoid pinching any wires. Your project is now complete, and you can enjoy the same peace of mind as you would with a commercially protected power strip.
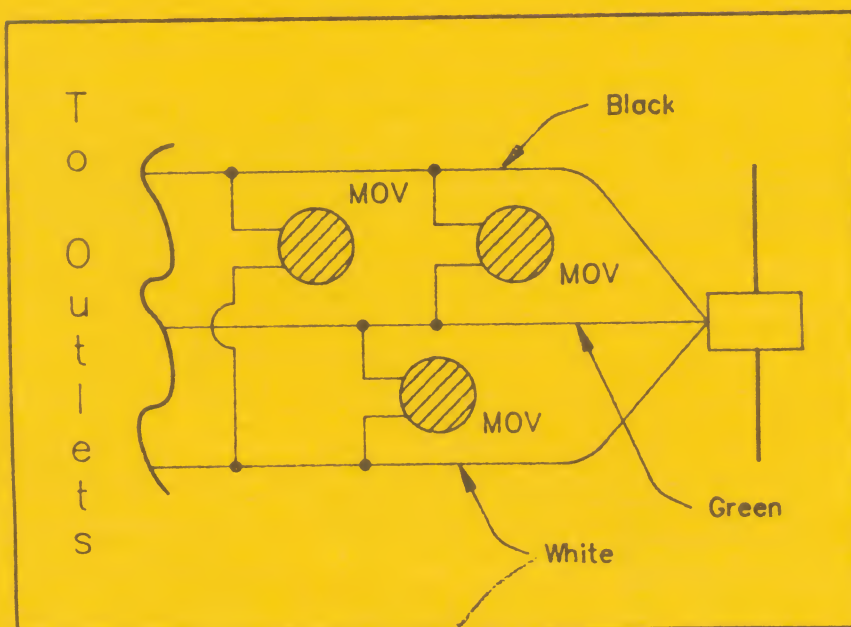
PARTS LIST

3 - 130 Volt Metal Oxide Varistor's (**Radio Shack 276-571** or equiv.)

Heat Shrink Tubing

Electrical Tape
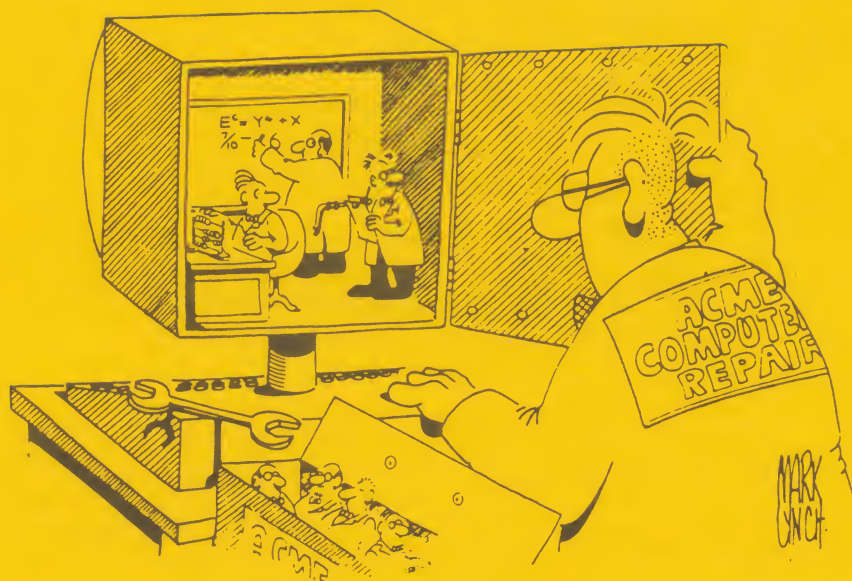
The Australian Atari Gazette
(Melbourne)

"HURRY DEAR. WE DON'T WANT
TO BE LATE FOR CHURCH!"
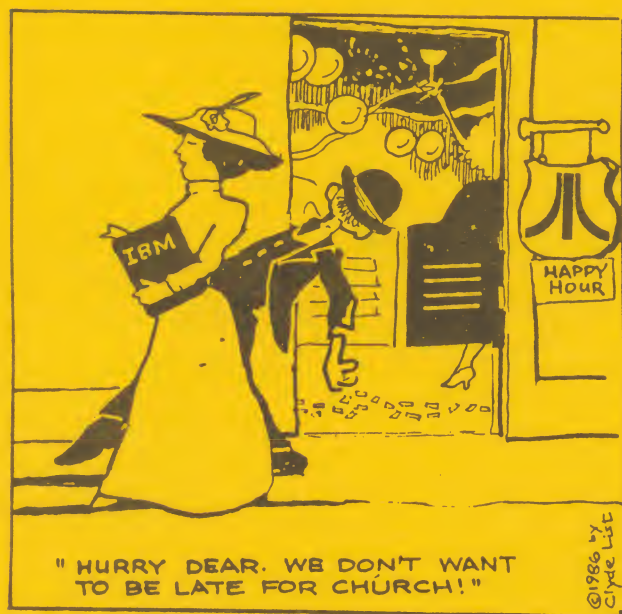
Portland Atari Club

COMPUTER
DOWN

PLEASE
THINK TILL
FURTHER
NOTICE

Page 29
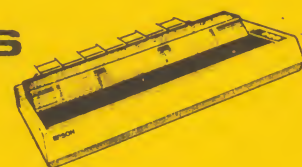
DISK LIBRARIAN'S REPORT

S. Cory - JACG

The Disk of the Month for January 1987 will be TURBO BASIC; the Disk of the Month for February 1987 will be PICTURE BONANZA FROM GERMANY. These disks will be available for purchase before the meeting for $3.00. Disk #39, Disk of the Month for December 1986, is still available for the $3.00 also.

H E L P

The Disk Librarian needs your help, and will "pay" for it. If you are interested and want more information, please see Sam Cory and provide him with your name-address-telephone and JACG number on a card or other suitable media.

LETTER TO THE EDITOR

Dear Editor,

My suggestion to the JACG Newsletter is to start publishing letters to the editor. These would be especially helpful in getting capsule reviews on recent programs from those of us who don't feel we can do justice to a full review.

In that spirit I would like to recommend CREATIVE PROCESS from Antic Software. CP is an outline processor that gives you great power in organizing your thoughts in an outline format with a separate text screen for every line. Moving and rearranging is very fast with practice. Double density is supported and works if you have DOS XL from OSS. Documentation (31 pages worth) must be printed out from the disk and help screens give you lists of available commands. Your final outline can be transferred, via a text file, to the popular word processors, or printed out at any time by the program. It works and the price is right ($15.95 at Gemini).

Don MacLeay

Editor's note: I heartily accept letters to the editor, and, as in this case, many will find their way into the immortality of print. Thank you Don!

WANTED: I will pay the best price   for a TV to Computer Switch Box. It must be for the Atari 8-bit computers, not the ST.   If wanted, I will trade Archon I by Electronic Arts (all original,   with documentation) for it.   Call Tom Pluck at 1 - 201 - 667 - 4226.

Rules For Merchant Sales at JACG Meetings

Commercial Sellers Must Advertise

The JACG Executive Committee has adopted the following policy concerning commercial sales at any JACG official meeting. The effective date of implementation will be with the July 14th, 1984 meeting.

1. Any merchant selling or renting products, selling services, or in any way promoting same at JACG club meetings must have an advertisement in the current or previous month's issue of the JACG Newsletter, 1/4 page minimum.

2. The number of merchants shall be restricted to three per meeting unless special permission is granted by the President. Preference will be given to current advertisers.

3. Each merchant will occupy no more than one table space or its equivalent. The JACG does not guarantee availability of tables.

4. Merchants are responsible for the return of all furniture they use to its original location and to leave their area neat and clean before leaving.

5. Merchants will check with the Advertising Manager for permission to set up prior to the meeting to have their qualification confirmed.

6. Merchants may not sell during the official meeting and must cease sales and clean up within 15 minutes after the end of the official meeting.

7. Any merchant violating these rules will be not allowed to operate at JACG functions until compliance is assured through the JACG Executive Committee.

8. A merchant is any person, or group of persons, who operate as a regular full or part-time business for the purpose of profit.

The purpose of these operating rules is to insure non-violation of the Bell Labora-tories use agreement which, if violated, could jeopardize JACG's use of the facilities. We appreciate your full cooperation in this matter. These rules do not apply to regular members selling their own second hand hardware or original software as outlined in the Flea Market Rules.

Remember, receiving the JACG Newsletter
is just one of the many benefits of being a
member of JACG.

MAIL TO: JACG-MEMBERSHIP CHAIRMAN

                  THOMAS PAZEL
                  70 MITCHELL RD. T-7
                  HACKETTSTOWN, NJ 07840

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TRADING POST
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Trading Post is a service for JACG members who
wish to sell or swap items of any type. There is
no charge for this service. Material must reach
the Editor by the 20th of the month to be
considered for inclusion in the following month's
Trading Post. No commercial services or items
will be accepted.

>>>>>>>><<<<<<<<<

FOR SALE: Atari XL/XE software:
INFOCOM's Enchanter and
Sorcerer, $15 each. Electronic
Arts' Archon I, $10. Origin
Systems' Ultima IV: the Quest of
the Avatar, $25 (it retails for
$59.95). All programs are
ORIGINAL with full documentation
except for reply cards. Take $5
off the full cost if two or more
are bought. Tom Pluck- 201 -
667 - 4226.

FOR SALE

ATARI 800XL and Indus D/S D/D disk drive (mint condition);
SYNCO amber monitor; 8" SIEMENS twin drives D/S D/D
complete with case, power supply and cables. Manuel
Ayres(201) 968-6112.

FOR SALE: Atari 800 with 48K. Also
includes Austin Franklin 80 column board and 80
column version of Letter Perfect & Data Perfect.
This is a true 80 column hardware display, not a
crummy software attempt. Awesome for word
processing. Only $150 takes it all. Dick Kushner
- 201-638-8732.

**FOR SALE: BMC high resolution
green/black monitor,** with sound. Perfect for
use with 80 column displays. Only $50. Dick
Kushner - 201-638-8732.

For Sale
- Indus GT drive with the free software that came with it.
Get true double density for the price of a 1050. $125.00
Bill Martin (201) 534-6349.

JACG NEWSLETTER - VOLUME 6, NUMBER 5

January 1987

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